DIONEX

INSTALLATION OF DIONEX FERRULE FITTINGS

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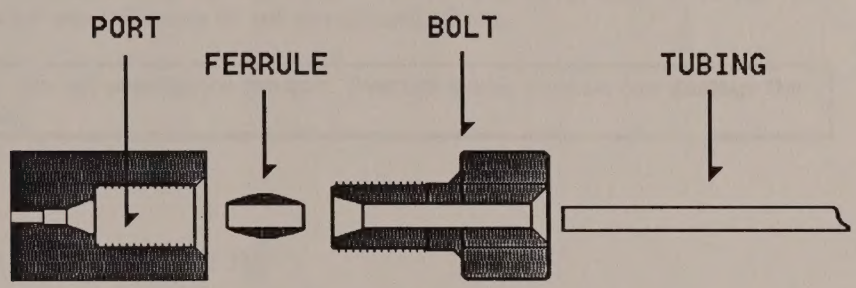
1.0 INTRODUCTION

The Dionex ferrule fitting system consists of a length of 1/16-inch OD tubing; a 10-32 threaded, tapered port; an HPLC Fitting Bolt (P/N 043275); and a Double-Cone Ferrule (P/N 043276).

The tubing can be any semi-rigid or rigid tubing, including Tefzel, PEEK, or stainless steel. The outside diameter of the tubing must be 0.062 inch. The inner diameter of the tubing must be small enough to prevent the wall of the tubing from collapsing when the fitting is installed. An inner diameter of 0.010-inch or 0.020-inch is recommended.

The fitting is intended to be installed into a 10-32 threaded, tapered port as shown in the figure below. The fitting is fabricated from high-strength plastic which conforms to a relatively large range of port geometries. The fitting, however, works most reliably in the 10-32 ports of the Dionex system.



When using a non-Dionex system, be especially careful to verify that you have obtained a good seal before beginning operation. If sealing problems persist, the 10-32 port may not be compatible with the fitting.

2.0 INSTALLATION

2.1 INITIAL INSTALLATION OF THE FERRULE FITTING

1a. If your tubing is Dionex-provided Tefzel with an OD of 0.065 inch, first pull on the end of the tubing just enough to stretch it slightly and thus decrease the OD. Cut the tubing in the center of the stretched area.

1b. If your tubing is plastic, and is **not** Dionex provided OD 0.065-inch Tefzel, use a razor blade to cut it to the final required length. Be very careful to cut the end square to the axis of the tubing.

1c. If you intend to use stainless-steel tubing, it is advisable to obtain passivated stainless-steel tubing which is already cut to length by machining. It is very difficult to cut stainless-steel tubing cleanly without using special tools.

2. Slide the bolt, hex-end-first, onto the tubing.

3. Slide the ferrule onto the tubing. The ferrule is symmetrical and can be placed onto the tubing either-end-first.

4. If your tubing is OD-0.065 inch Tefzel and you followed the procedure described in step 1a. above, cut the tubing to final length at a point where it is at its full OD and not stretched at all..

5. Make sure there are no burrs or jagged edges on the tubing. If the end of the tubing is clean and square, band broadening and dead volume in the analytical system are reduced.

6. Place the tubing with the bolt and ferrule into the 10-32 port and push the tubing snugly into the bottom of the port. **Make sure there is no gap between the end of the tubing and the bottom of the port.**

7. If your tubing is Tefzel, the ferrule fitting will reduce the ID of the tubing as the fitting is tightened. **Tighten the fitting only finger tight for use to 3000 psi. If additional tightening of the fitting is required to withstand higher pressures, the Tefzel tubing ID will be reduced. Continued tightening will close the tubing ID completely. TIGHTEN WITH CARE.**

8. If your tubing is **not** Tefzel, while holding the tubing in place with one hand, screw the bolt into the port fingertight. Then, using a 5/16 wrench, tighten the bolt **no more than 1/4 turn** until you feel a slight resistance as the ferrule just starts to seat. Press the tubing firmly into the port again to prevent any gap, and tighten the bolt an additional 1/2 turn.

CAUTION: Do not overtighten the bolt. Overtightening the bolt can damage the mating port.

2.2 REINSTALLATION OF A FERRULE FITTING

If you disconnect the ferrule fitting from a port, you can reinstall it into the same port without remaking the fitting. However, if you plan to reinstall the fitting into a port other than the original one, follow the precautions below to ensure optimum operation of the system.

- If the fitting is on plastic tubing, recut the tubing and install a new ferrule (P/N 043276).
- If the fitting is installed on stainless steel tubing, it is not necessary to recut the tubing or replace the fitting. Be very careful to **firmly** seat the tubing in the bottom of the new port.

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